- CDA station control for alarm monitoring and tracking strategy optimization
- system control for traffic and load observations.
- processing center control for center behavior and automatic reconfiguration procedures.

4. User Terminals

The user terminals are designed to be small, light-weight (50 to 100 grams). Low cost can be achieved using widely used VHF components on 1W terminals.

These terminals are likely to find applications in a wide-range of environments. Major applications by user terminal type include:

- terrestrial vehicles,
- maritime applications,
- personal, hand-held (pocket sized),
- fixed.

Basically, the main types of user terminals are:

1. "LOCPAC"SM, a simple transmit only terminal for one-way pre-programmed transmission to a PACC, wherein location is calculated by differential Doppler in the PACC.

   Cost: ~ $50.00

2. "HELPAC"SM , a two-way communications user terminal for alarm messaging and location with built-in acknowledgement of message received by PACC. The basic terminal will have simple transmit and receive channels with an omnidirectional antenna. Only one type of message will be send and received by the terminal. The fourteen (14) channels available will be randomly assigned during the manufacturing process location calculation will be computed upon reception of only one message

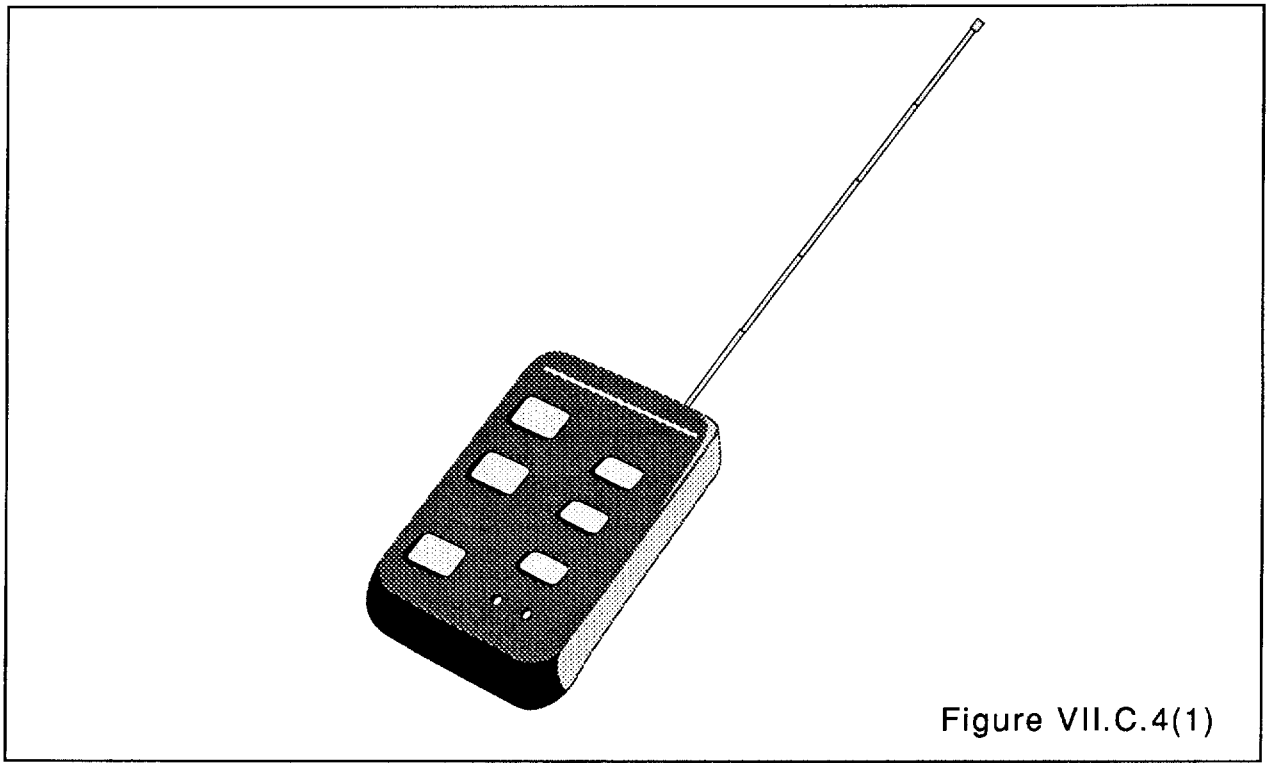


Figure VII.C.4(1)

by using ranging and Doppler measurements (see Figure VII.C.4(1)).

Cost: ~$75.00

3. "KEYPAC"SM, an improved two-way communications terminal with the capability for the user to enter and receive thirty-two (32), characters over one of the fourteen (14) randomly assigned channels. The maximum number will be one-hundred (100) characters. (see Figure VII.C.4(2)).

Cost: ~$125.00 - $150.00

4. "DATAPAC"SM, a two-way data collection and location terminal appropriate for all types of in-situ environmental monitoring. This user terminal will be a direct replacement for all Argos system terminals currently operating on 401.65 Mhz.

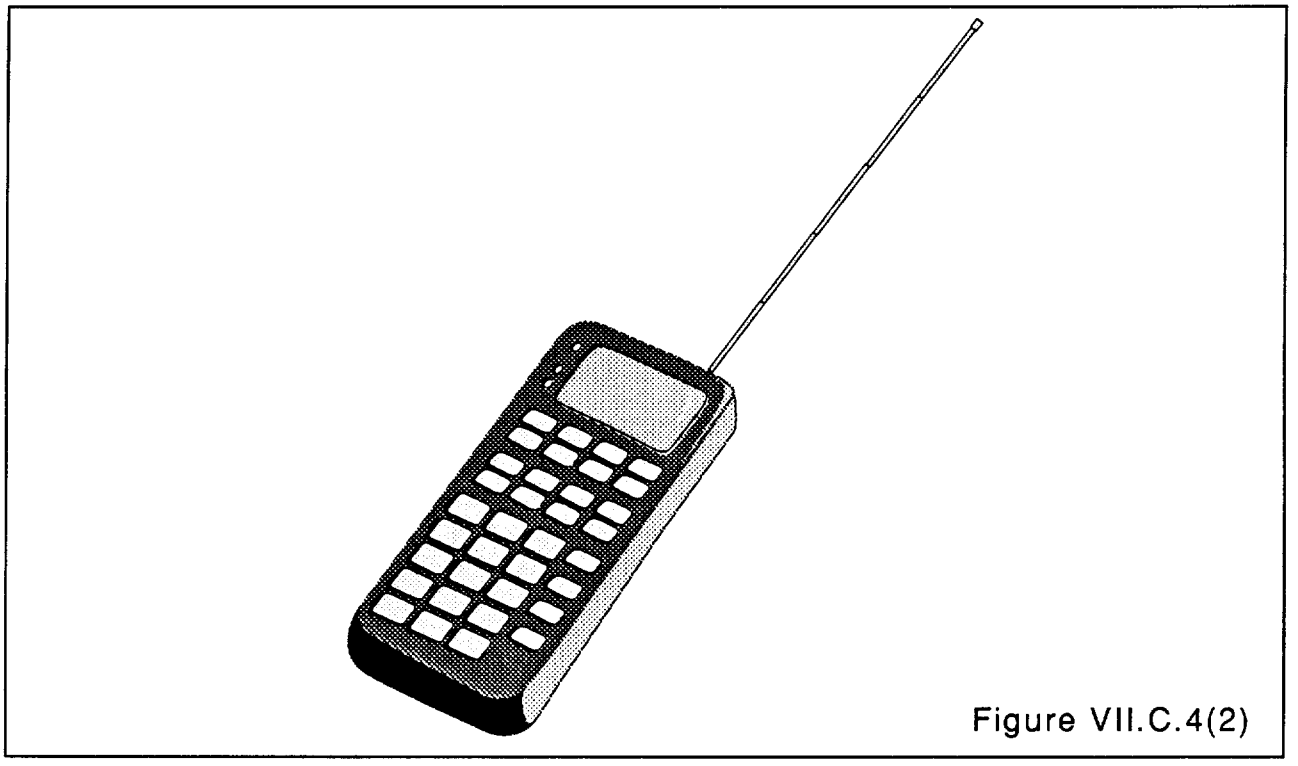


Figure VII.C.4(2)

Cost: ~$100.00 - $125.00

User terminals will be manufactured and marketed by the U. S. consumer electronics industry.

5. Operations

STARSYS, Inc. will have the global system responsibility as system designer and owner. STARSYS, Inc. will also have the responsibility to operate the STARNET system in north America.

5.1 Global Responsibility

Global responsibility is composed of those technical operations conducted under system management, plus the contractual

responsibilities involved in coordination with licensed operators in other countries.

5.1.1 System Management

System management includes all the tasks that have to be performed once on a world-wide basis, while system usage is managed on a regional basis. This includes the in-orbit spacecraft monitoring, constellation build-up and maintenance, system performance monitoring and improvment.

5.1.1.1 Spacecraft Monitoring

Management of the STARNET Operations Control Centers (SOCCs) will be conducted at PACC East and PACC West. Each center will share monitoring of the satellites (e.g. 12 at every center). The PACCs (and SOCCs), will be operated twenty-four (24) hours a day, seven (7) days a week, since there will always be at least one (1) satellite in view. The SOCCs will also compute the satellite's orbit. Other than launch support activities, monitoring of each spacecraft will be done on a daily basis.

5.1.1.2 Constellation Build-up and Maintenance

STARSYS, Inc. will progressively build up the STARNET constellation of twenty-four (24) satellites. Timing of the next spacecraft launch will be based on:

- FCC approval;
- launch opportunity; and
- satellite operability.

The proposed spacecraft lifetime is five (5) years. It will thus be necessary to schedule manufacturing replacement and launches.

5.1.1.3 System Performance Monitoring

The global performance of the system will be systematically checked against the designed performance, and take into account regional traffic loads.

Analysis of the measured performance versus the evolution of the market will target the need for system enhancement, which will be done either by modifying the spacecraft design or through software modifications in the PACCs.

5.1.2 Licensing Coordination in Other Countries

STARSYS, Inc. will coordinate through licensed operators in other countries for contractual matters and for technical information. User terminals will be operated only in accordance with national regulations and ITU Rules.

5.2 Regional Responsibility

STARSYS, Inc. will closely monitor the performance of the two (2) PACCs and the other two (2) regional CDAs (Alaska and Hawaii), in order to insure routine and timely service to all North American users. The different tasks to be performed are principally: i) operation of the ground facilities, ii) performance monitoring, and iii) user services.

5.2.1 Usage Within the U. S.

The two U. S. PACCs will be operated twenty-four (24) hours a day, seven (7) days a week. One is the back-up of the other, and both PACCs have the capability of processing all the North American user terminals without any performance degradation.

North American STARNET users will be assigned to either the east or west center depending on their geographical area of operation.

5.2.2 Performance Within the U. S.

Performance monitoring within the U. S. mainly deals with system usage and traffic load. With 10 to 20 million captured users, the traffic load could alter the performance of specific applications. Actions will have to be taken either on system design or on marketing policy or tariff structure.

5.2.3 User Services

Management of 10 to 20 million users is a complex task. Space related companies are not yet well prepared to do it. Nevertheless, experience gained through its business affiliates puts STARSYS, Inc. in a very competitive position with respect to non-space related companies.

All mass processing like subscriptions and billing will be sub-contracted to companies well established and reputable: manufacturers and/or dealers for subscriptions, banks for billing and payment through credit cards.

STARNET operators will be in permanent close contact with appropriate Emergency Service Authorities in the various states and counties.

Specific applications such as rented car surveys will need direct contact with each car rental company.

5.2.3.1 Contact with Manufacturers and Dealers

Unique user terminal identification numbers and random channels will be assigned during manufacturing.

Dealers will have the obligation to sell equipment specific to the application, complete with proper operating instructions.

Dealers will sell the equipment with a one year service warrantee.

Use of the emergency call will be charged separately, directly to users or to insurance companies or to any third parties with whom contracts are established.

5.2.3.2 Billing Services and Subscriptions

Manufacturers will be assigned terminal IDs by blocks of 10,000 or 100,000. Corresponding subscriptions can be entered manually and billed.

The starting date of the subscription is the date of selling. The dealer will complete a form with name, address of new owner, type of use, type of emergency, region of operation, etc. This information will be entered into the PACC computers through standard telephone networks using a smart terminal.

5.2.3.3 Emergency Service Authorities

STARNET will be known by the different Emergency Services, and recognized as a reliable and low cost Personal Emergency Messaging and Positioning Service. When a STARNET operator calls, he has to be believed and the required emergency service must proceed immediately without question.

Required information will be given and needed connections with these services will be established before the start of operational STARNET services, and will be maintained thereinafter.

5.2.3.4 Car Rental Companies

An example involving an auto rental company:

All rented cars of Company X will be fitted with a STARNET terminal. As an example, the terminal will transmit regularly when the rental

contract is ended, or in event of accident, personal emergency, or on rental company demand.

All terminal transmissions will be routed to the company, which is responsible for the follow-up.

Subscription and billing functions only deal with the company.

D. PROGRAM AND LAUNCH SCHEDULE

1. Introduction

The Program Schedule for the STARNET system is designed to provide a global LEO MSS communications network through 24 operational satellites by 15 September 1995. The Program Schedule presented here is based upon Commision approval of this application on or before 15 June 1991.

The complete constellation of 24 satellites will be launched within fifty-one (51) months after Commission approval.

Satellites will be designed and quality controlled twelve (12) months after program inception. Delivery of the satellites will commence twenty-four (24) months after Commision approval. Satellite manufacturer schedules are to deliver three (3) satellites a quarter over eight (8) quarters. Satellite integration on the launcher is four (4) months for the first launch and one (1) month for subsequent launches.

Launches will be conducted at a rate of three (3) every quarter. Spares will be provided and launched as required.

The launch period will start from the third quarter of 1994 to the second of 1995, assuming Commision approval in the second quarter of 1991.

The key STARNET program milestones are divided into two categories: pre-contract program commoon events, and spacecraft- specific events.

2. Pre-Contract Events

Pre-contract events, i.e., those activities leading up to and including the execution of a contract for the procurement of spacecraft, launch vehicles, and launch services for the STARNET program, include:

- Preparation and issuance of an "Request for Proposals for satellites, launch vehicles and launch services, (120 days);
- Submission by industry of proposals for spacecraft construction, launch vehicles and launch services, (90 days);
- Evaluation of proposals; selection of contractors, (30 days);
- Spacecraft contract finalization, (30days);
- Launch vehicle/launch services contract finalization, (60 days from spacecraft contract finalization).

3. Spacecraft-Specific Events

The spacecraft manufacturing program and launch schedule is designed to enable total system operation to commence on 15 September 1995. The STARNET program schedule allows 24 months for the manufacturing and testing of each of the 24 operational components of the STARNET system. Launches will be conducted at a rate of three (3) a quarter.

Spacecraft-specific events are depicted in Table 1, and include:

- Initiation of spacecraft consrtruction;
- Completion of spacecraft construction;
- Spacecraft launch/in-orbit testing; and,
- Spacecraft ready for service.

The STARNET control centers will be procured as part of the spacecraft contract and will be completed four (4) months before the launch of F1.

TABLE 1:

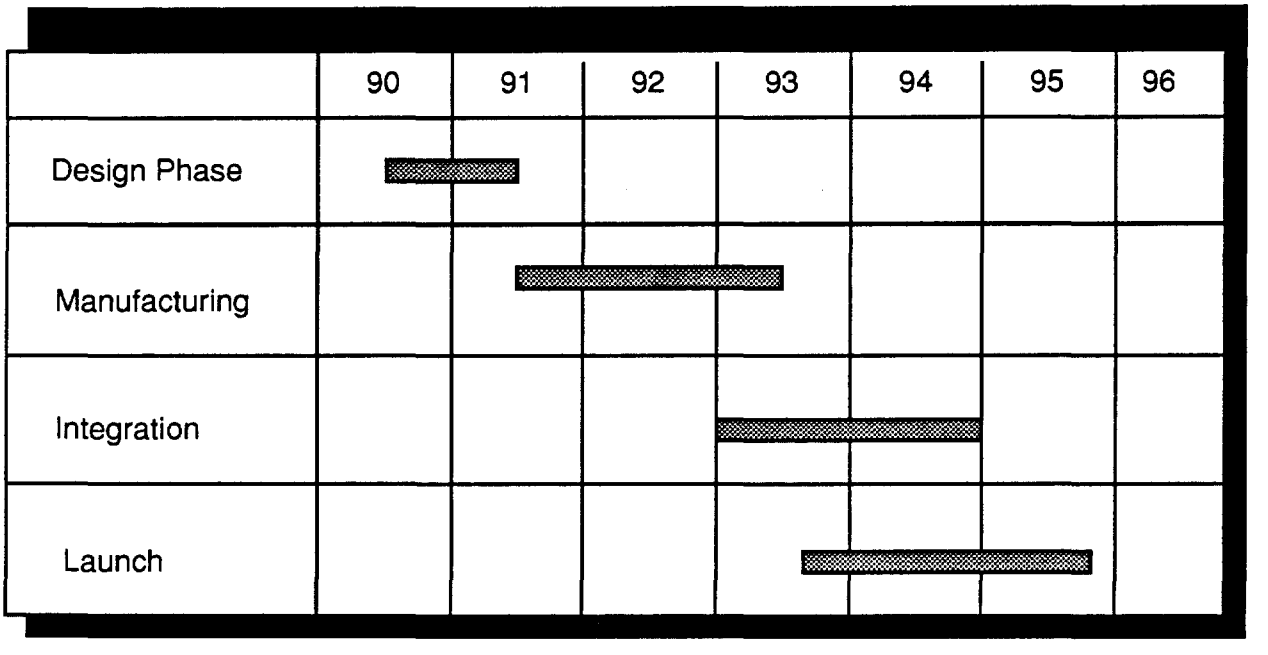
PART 1	FCC AUTHORIZATION TO PROCEED	6/15/91
PART 2	PROGRAM SCHEDULE	
	a. Spacecraft RFP	12/15/90
	b. Spacecraft Proposal Received	4/15/91
	c. Spacecraft Contractor Selected	5/15/91
	d. Spacecraft Contract Finalized	6/15/91
	e. Launch Vehicle/Services Contract Execution	8/15/91

PART 3 SCHEDULE FOR SPACECRAFT

A = Spacecraft construction initiated
B = Spacecraft construction completed
C = Spacecraft launch
D = Spacecraft placed in service

S/C	A	B	C	D
F1	6/15/91	6/15/93	10/15/93	11/15/93
F2	7/15/91	7/15/93	11/15/93	12/15/93
F3	8/15/91	8/15/93	12/15/93	1/15/94
F4	9/15/91	9/15/93	1/15/94	2/15/94
F5	10/15/91	10/15/93	2/15/94	3/15/94
F6	11/15/91	11/15/93	3/15/94	4/15/94
F7	12/15/91	12/15/93	4/15/94	5/15/94
F8	1/15/92	1/15/94	5/15/94	6/15/94
F9	2/15/92	2/15/94	6/15/94	7/15/94
F10	3/15/92	3/15/94	7/15/94	8/15/94
F11	4/15/92	4/15/94	8/15/94	9/15/94
F12	5/15/92	5/15/94	9/15/94	10/15/94

F13	6/15/92	6/15/94	10/15/94	11/15/94
F14	7/15/92	7/15/94	11/15/94	12/15/94
F15	8/15/92	8/15/94	12/15/94	1/15/95
F16	9/15/92	9/15/94	1/15/95	2/15/95
F17	10/15/92	10/15/94	2/15/95	3/15/95
F18	11/15/92	11/15/94	3/15/95	4/15/95
F19	12/15/92	12/15/94	4/15/95	5/15/95
F20	1/15/93	1/15/95	5/15/95	6/15/95
F21	2/15/93	2/15/95	6/15/95	7/15/95
F22	3/15/93	3/15/95	7/15/95	8/15/95
F23	4/15/93	4/15/95	8/15/95	9/15/95
F24	5/15/93	5/15/95	9/15/95	10/15/95
F25	6/15/93	6/15/95	10/15/95	11/15/95
F26	7/15/93	7/15/95	11/15/95	12/15/95


90
91
92
93
94
95
96
Design Phase
Manufacturing
Integration
Launch

F. ENGINEERING CERTIFICATE

I hereby certify that I am the technically qualified person responsible for preparation of the engineering information contained in these applications, that I am familiar with Part 25 of the Commission's Rules and Regulations, that I have reviewed the engineering information submitted in these applications, and that it is complete and accurate to the best of my knowledge.

Dated this 4th day of May, 1990

By: /s/ Jean-Luc Bessis
Jean-Luc Bessis
President
North American CLS, Inc.

CONCLUSION

In the foregoing parts of this application, STARSYS has demonstrated that its proposed STARNET system will advance numerous public, national, and global interests. In addition, STARSYS has shown that it is legally, technically, and financially qualified to construct the 24 in-orbit spacecraft that will comprise STARNET.

Never before has a single satellite system stood to offer the universally-available, low-cost, and spectrally-efficient mobile communications and position-determining services that STARSYS seeks to provide. STARSYS urges the Commission to act expeditiously to grant this application and to authorize STARSYS to construct the STARNET system.

Respectfully submitted,

STARSYS, INC.

By: /s/ Ashok Kaveeshwar
Ashok Kaveeshwar
President
STARSYS, Inc.
2000 K Street, N.W.
Suite 620
Washington, D.C. 20006

Raul R. Rodriguez
Stephen D. Baruch
Leventhal, Senter & Lerman
2000 K Street, N.W.
Suite 600
Washington, D.C. 20006
(202) 429-8970

Its Attorneys

May 4, 1990

APPENDICES

FCC 430

FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

Approved by OMB
3060-0105
Expires 3/31/90

COMMON CARRIER AND SATELLITE RADIO LICENSEE QUALIFICATION REPORT

See reverse side for information regarding public burden statement.

INSTRUCTIONS

A. The "Filer" of this report is defined to include: (1) An applicant, where this report is submitted in connection with applications for common carrier and satellite radio authority as required for such applications; or (2) A licensee or permittee, where this report is required by the Commission's Rules to be submitted on an annual basis.

B. Submit an original and one copy (sign original only) to the Federal Communications Commission, Washington, DC 20554. If more than one radio service is listed in Item 6, submit an additional copy for each such additional service. If this report is being submitted in connection with an application for radio authority, attach it to that application.

C. Do not submit a fee with this report.

1. Business Name and Address (Number, Street, State and ZIP Code) of Filer's Principal Office:	2. (Area Code) Telephone Number:
STARSYS, Inc. 2000 K Street, N.W., Suite 620 Washington, D.C. 20006	(301) 495-0172
	3. If this report supercedes a previously filed report, specify its date: N/A
4. Filer is (check one): ☐ Individual ☐ Partnership ☒ Corporation ☐ Other (Specify):	5. Under the laws of what State (or other jurisdiction) is the Filer organized? Delaware

6. List the common carrier and satellite radio services in which Filer has applied or is a current licensee or permittee:

None

7(a) Has the Filer or any party to this application had any FCC station license or permit revoked or had any application for permit, license or renewal denied by this Commission? *If "YES", attach as Exhibit I a statement giving call sign and file number of license or permit revoked and relating circumstances.*	☐ Yes	☒ No
(b) Has any court finally adjudged the Filer, or any person directly or indirectly controlling the Filer, guilty of unlawfully monopolizing or attempting unlawfully to monopolize radio communication, directly or indirectly, through control of manufacture or sale of radio apparatus, exclusive traffic arrangement, or other means of unfair methods of competition? *If "YES", attach as Exhibit II a statement relating the facts.*	☐ Yes	☒ No
(c) Has the Filer, or any party to this application, or any person directly or indirectly controlling the Filer ever been convicted of a felony by any state or Federal Court? *If "YES", attach as Exhibit III a statement relating the facts.*	☐ Yes	☒ No
(d) Is the Filer, or any person directly or indirectly controlling the Filer, presently a party in any matter referred to items 7(b) and 7(c)? *If "YES", attach as Exhibit IV a statement relating the facts.*	☐ Yes	☒ No
8. Is the Filer, directly or indirectly, through stock ownership, contract or otherwise, currently interested in the ownership or control of any other radio stations licensed by this Commission? *If "YES", submit as Exhibit V the name of each such licensee and the licensee's relation to the Filer.*	☐ Yes	☒ No

If Filer is an individual (sole proprietorship) or partnership, answer the following and Item 11:

9(a) Full Legal Name and Residential Address (Number, Street, State and ZIP Code) of Individual or Partners:	(b) Is individual or each member of a partnership a citizen of the United States?	☐ Yes	☐ No
	(c) Is individual or any member of a partnership a representative of an alien or of a foreign government?	☐ Yes	☐ No

If Filer is a corporation, answer the following and Item 11:

10(a) Attach as Exhibit VI the names, addresses, and citizenship of those stockholders owning of record and/or voting 10 percent or more of the Filer's voting stock and the percentages so held. In the case of fiduciary control, indicate the beneficiary(ies) or class of beneficiaries.

See Exhibit VI

(b) List below, or attach as Exhibit VII the names and addresses of the officers and directors of the Filer.

See Exhibit VII

(c) Is the Filer directly or indirectly controlled by any other corporation? ☒ Yes ☐ No

If "YES", attach as Exhibit VIII a statement (including organizational diagrams where appropriate) which fully and completely identifies the nature and extent of control. Include the following: (1) the address and primary business of the controlling corporation and any intermediate subsidiaries; (2) the names, addresses, and citizenship of those stockholders holding 10 percent or more of the controlling corporation's voting stock; (3) the approximate percentage of total voting stock held by each such stockholder; and (4) the names and addresses of the president and directors of the controlling corporation.

See Exhibit VIII

(d) Is any officer or director of the Filer an alien? ☐ Yes ☐ No

(e) Is more than one-fifth of the capital stock of the Filer owned of record or voted by aliens or their representatives, or by a foreign government or representative(s) thereof, or by a corporation organized under the laws of a foreign country? ☐ Yes ☐ No

(f) Is the Filer directly or indirectly controlled: (1) by any other corporation of which any officer or more than one-fourth of the directors are aliens, or (2) by any foreign corporation or corporation of which more than one-fourth of the capital stock is owned or voted by aliens or their representatives, or by a foreign government or representatives thereof. ☐ Yes ☐ No

(g) If any answer to questions (d), (e) or (f) is "YES", attach as Exhibit IX a statement identifying the aliens or foreign entities, their nationality, their relationship to the Filer, and the percentage of stock they own or vote.

11. CERTIFICATION

This report constitutes a material part of any application which cross-references it, and all statements made in the attached exhibits are a material part thereof. The ownership information contained in this report does not constitute an application for, or Commission approval of, any transfer of control or assignment of radio facilities. The undersigned, individually and for the Filer, hereby certifies that the statements made herein are true, complete and correct to the best of Filer's knowledge and belief, and are made in good faith.

WILLFUL FALSE STATEMENTS MADE ON THIS APPLICATION ARE PUNISHABLE BY FINE AND IMPRISONMENT (U.S. Code, Title 18, Section 1001) and/or REVOCATION OF ANY STATION LICENSE OR CONSTRUCTION PERMIT (U.S. Code, Title 47, Section 312(a)(1)).	Date	Filer (Must correspond with that shown in Item 1)	Typed or Printed Name
	05/04/90	STARSYS, Inc.	Dr. Ashok Kaveeshwar
	Signature		Title
	/s/ Ashok Kaveeshwar		President

NOTICE TO INDIVIDUALS REQUIRED BY THE PRIVACY ACT OF 1974 AND THE PAPERWORK REDUCTION ACT OF 1980

The solicitation of personal information requested in this form is to determine if you are qualified to become or remain a licensee in a common carrier or satellite radio service pursuant to the Communications Act of 1934, as amended. No authorization can be granted unless all information requested is provided. Your response is required to obtain the requested authorization or retain an authorization.

Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Federal Communications Commission, Office of Managing Director, Washington, DC 20554, and to Office of Management and Budget, Paperwork Reduction Project (3060-0105), Washington, DC 20503.

EXHIBIT VI

MARCOR, Inc., a Washington, D.C. corporation, owns 5 percent of the voting stock of Filer.* The business address of MARCOR, Inc. is 800 K Street, N.W., Suite 750, Washington, D.C. 20001.

North American CLS, Inc., a Delaware corporation, owns 95 percent of the voting stock of Filer.** The business address of North American CLS, Inc. is 1801 McCormick Drive, Suite 10, Landover, Maryland 20785.

* The shares of Filer owned by MARCOR, Inc. carry 20 director votes per share.

** The shares of Filer owned by North American CLS, Inc. carry 1 director vote per share.

EXHIBIT VII

STARSYS, Inc. Officers and Directors:

Dr. Ashok Kaveeshwar (President and Director)
2000 K Street, N.W.
Suite 620
Washington, D.C. 20006

Jean-Luc Bessis (Director)
2000 K Street, N.W.
Suite 620
Washington, D.C. 20006

Wilbur Pritchard (Director)
2000 K Street, N.W.
Suite 620
Washington, D.C. 20006

Martin Rothblatt (Director)
2000 K Street, N.W.
Suite 620
Washington, D.C. 20006

Lisa Shaffer (Director)
2000 K Street, N.W.
Suite 620
Washington, D.C. 20006

EXHIBIT VIII

MARCOR, Inc., a Washington, D.C. corporation with its principal place of business at 800 K Street, N.W., Suite 750, Washington, D.C., is a telecommunications consulting firm. Martin Rothblatt, a United States citizen with the same business address as MARCOR, Inc., is the sole stockholder of MARCOR, Inc. Martin Rothblatt is the president and a director of MARCOR, Inc. Bina Rothblatt and Eleanor Leung are directors of MARCOR, Inc., with the same business addresses as MARCOR, Inc.

The nature and extent of the control of MARCOR, Inc. over STARSYS, Inc. is explained in Attachment A hereto.

Attachment A
FCC Form 430
Exhibit VIII

NORTH AMERICAN COLLECTION & LOCATION BY SATELLITE

2 May 1990

Mr. Martin Rothblatt
President
MARCOR, Inc.
Techworld Plaza
Washington, D.C. 20001-8000

Dear Martin,

I understand that you are willing to serve as an independent Director of our new company, STARSYS, Incorporated. We greatly appreciate having a person of your stature willing to serve on our Board, and we hereby formally invite you to be elected as one of five founding Directors this week.

It is agreed that your primary purpose as an independent Director of STARSYS is to help insulate the business from the possibility of any foreign governmental influence on its operations as an FCC licensee. Each Director will do his best to ensure STARSYS complies with its charter to operate a LEO MSS system in the U.S. public interest, along the lines described to the FCC in our Application, a draft of which will be sent to you by courier.

At our founding Board meeting, we expect to approve a resolution authorizing $8,000 per Director in outside Director fees for the year May 1, 1990 through April 30, 1991. Such fees will be paid in four installments: one-fourth on May 15th, 1990; one-fourth on August 15th, 1990; one-fourth on November 15th, 1990; one-fourth on February 15th, 1991, and on the same dates during each succeeding one year period. It is also agreed that each of you will voluntarily resign from the Board in the event STARSYS business is abandoned due to lack of FCC approval or if the company is dissolved. No further Director fees would be owed in these cases.

NACLS, INC.

1801 McCORMICK DRIVE, SUITE 10 ● LANDOVER, MARYLAND 20785 ● (301) 341-1814 ● TELEX: 898 146 FAX: 925-8995
CLS SERVICE ARGOS 18, AVENUE EDOUARD-BELIN 31055 TOULOUSE CEDEX Tel. 61 27 43 51 Telex 531 752F FRANCE

It is understood that nothing in your Directorship will require you to be in conflict with Geostar or its subsidiaries, nor to compete with that company or its subsidiaries. Should any issue of potential competition with Geostar arise, either directly or indirectly, you shall be permitted to recuse yourself from those discussions, and that you in fact have advised me that you will recuse yourself.

Please call me to confirm that your understandings are the same as mine, and show your agreement by signing below.

Sincerely,

Jean-Luc Bessis
President, NACLS

Date: May 2, 1990

AGREED:

Martin Rothblatt
President, MARCOR, Inc.

Date: 5/2/90

APPENDIX 2

REFER TO "Volume 2: Individual Applications"

APPENDIX 3

LIST OF STARNET PREDECESSOR TECHNOLOGY USERS

Since 1978, more than 1000 User programs (or applications) have used the Argos Data Collection and Location System. These programs involve about 13,000 platforms. Today, data from over 1500 platforms are processed and distributed all over the world, leading to a daily average of 10,500 location determinations and 130,00 processed messages.

The following pages give the status of the system Usage on March 1, 1990 and the list of the new applications approved since May 1989.

ACTIVE PROGRAMS 1ST MARCH 1990

	PROGRAM NAME	ORGANIZATION	FIELD
AUSTRALIA			
	TIDE SEA LEVEL	ABM	OCEANOLOGY
	ACT E&W	ACT ELECTRICITY	HYDROLOGY
	ANTAR.MONIT.	ANTARCTIC DIVISION	METEOROLOGY
	ANT.SURF.MET	ANTARCTIC DIVISION	OCEANOLOGY
	AUS SHIPBOARD PAB TRIAL	AUST.MET.OFF	OCEANOLOGY
	AUST.DRIF.BU	AUST.MET.OFF	OCEANOLOGY
	AUST.AWS	AUST.MET.OFF	OCEANOLOGY
	AUST.CURR.	CSIRO	OCEANOLOGY
	HYDROMETRIC DAC	ENGIN & WATER SUPPLY	HYDROLOGY
	HYDSAT JOINT VENTURE	HYDROL.SERV.PTY LTD	HYDROLOGY
	PERS LOC BEACON	RAN	EXPEDITION
	GULF ST VINCENT WATER	S. AUST DPT OF FISH.	OCEANOLOGY
Total = 12			
BANGLADESH			
	ACEMP	SPARRSO	HYDROLOGY
Total = 1			
BOLIVIA			
	RESEAU D'ALARME HYDRO.	SERV.NACION DE METEO.	HYDROLOGY
Total = 1			
BRAZIL			
	BRAZIL	DNAEE	HYDROLOGY
	INPE'S EXPER ARGOS	INPE'S	METEOROLOGY
Total = 2			